

REMARKS

In response to the above Office Action, claims 1-23 have been cancelled and replaced by new claims 24-29 to more specifically claim applicants' invention and distinguish it from the cited prior art.

New independent claim 24 comprises a combination of claims 2 and 10, both examined claims, and a characteristic of the polymer that it "reversibly forms a stable crosslinked structure at room temperature and dissociates the crosslinked structure at a temperature of 120°C or higher." Support for this characteristic of the claimed thermoplastic polymer can be found, for example, on page 4, line 20 to page 5, line 6; page 21, five lines from the bottom to page 6, line 2, page 6, lines 12-15; and page 33, lines 12-18.

In other words, at room temperature the crosslinked structure of the polymer is stable having the desired rubber elasticity and tensile strength, but when it is heated to 120°C or higher, it is easily softened to dissociate the crosslinked structure and imparting flowability to the polymer. Even when formation of the crosslinked structure and dissociation of the crosslinking are repeatedly performed, the physical properties of the polymer are not impaired making it possible to impart a recycleability property to the polymer.

New independent claim 27 is a combination of claims 3 and 10, also examined claims, as well as the same noted characteristic of the thermoplastic polymer. Finally, claims 25 and 28 correspond to claims 5 and 6 and claims 26 and 29 to claims 16 and

17, all examined claims. Thus it is believed new claims 24-29 are consistent with the claims examined in this case.

In the Office Action, the Examiner rejected claims 1-3, 5, 6, 8-11, 16, and 17 under 35 U.S.C. §103(a) for being obvious over Benfarmeo, Nalesnick, or Auda.

Though the Examiner included claim 10 in the rejection, no specific comment was made about the structures of formulae (1), (2), and (3) making up the side chain of the thermoplastic polymer together with the elastomer making up the main claim of the polymer.

None of these structures are disclosed in any of the three cited references. Nor do the references teach or suggest a thermoplastic polymer that reversibly forms a stable crosslinked structure at room temperature and dissociates the crosslinked structure at a temperature of 120°C or higher, as claimed, the benefits of which are described above.

As required by M.P.E.P. §2143, to establish a prima facie case of obviousness, the prior art reference relied on must teach or suggest all of the claim limitations. Since none of the three cited references teach a thermoplastic polymer having the structure or the properties of the thermoplastic polymer of claim 24 or 27, it is submitted that neither of the claims can be considered obvious over any one of these references. Their withdrawal as a ground of rejection of the claims is therefore requested.

Regarding the rejection of the claims for obviousness-type double patenting over U.S. Patent No. 6,512,051, attached is a Terminal Disclaimer obviating this ground of rejection.

It is believed claims 24-29 are in condition for allowance.

In view of the foregoing amendments and remarks, Applicants respectfully reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By: _____



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**Attachments: Terminal Disclaimer
Request for Correction of Inventorship Under Rule 1.48(b)**

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